



Division of Environmental Health

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Rainstorm Flooding

HEALTH ADVISORY and CLEAN-UP GUIDANCE

The physical damage brought by flood waters is accompanied by very real health and safety concerns.

Several issues should be considered when dealing with recovery after a flood to help people protect themselves from illness, injury, and death. Humboldt County Division of Environmental Health is providing the following health advisory and clean-up guidance to assist the community as they confront flooding and restore their property.

FLOOD WATER HEALTH HAZARDS

- Assume that flood waters contain sewage and should be avoided if at all possible. People with suppressed immune systems, plus the very young and older segments of the public, are especially vulnerable to disease producing organisms in flood water.
- People exhibiting symptoms such as fever, sore throat, cough, respiratory illness, nausea, intestinal upset including diarrhea following contact with flood waters are advised to see a physician.

Where flooding has inundated housing, precautions must be taken to minimize contact with contaminated surfaces and to avoid ingesting contaminated water and food. Food that has been in contact with flood waters must be discarded.

CLEAN-UP GUIDANCE

- Be sure the building is structurally sound before entering. Avoid entering buildings that could be a collapse or electrical shock hazard.
- Enter flooded buildings with extreme caution, and only with guidance or assistance from structural and electrical experts. Follow instructions of utility company concerning restoration of service.
- Contact your insurance agent. Professional clean up services may be covered and will help you avoid an injury or illness.
- Children should be kept away from flood areas and flooded buildings.
- Perform clean-up only after all safety precautions have been taken and waters have receded.
- Avoid routing sewage to storm drains. Contract a permitted septic pumper to dispose of sewage that may have overwhelmed the septic tank in unsewered areas.
- If using a portable generator for electricity during flood cleanup, it must be installed OUTSIDE and away from buildings. The exhaust could kill you in minutes if you breathe it in.
- Throw away anything that was wet with flood water and can't be cleaned.

- To disinfect interior surfaces where flood waters have been in contact, use a mixture of two teaspoons of household bleach in one gallon of water (which equals approximately 100 Parts per million available chlorine).
- Damaged vinyl floor tiling and wallpaper should be handled with care, as crushing such material can release potential asbestos particles which can then be inhaled. Seek advice of clean-up contractors when unsure on how to proceed.
- Disinfect suspect drinking water stored or from the tap before consuming. Boiling water for at least three minutes is the safest way to disinfect drinking water.
- Store bought water purification tablets (follow manufacturer's directions) and regular household bleach is also acceptable for drinking water disinfection (**caution:** use only household chlorine bleach with no fabric softeners or other additives). Using bleach, add eight drops to one gallon of clear water, or 16 drops to cloudy water, and let stand for 30 minutes before using.
- Pump well water to a waste line or appropriate site until clear and colorless.
- Stop pump, turn OFF electrical power to pump.
- Open well by removing cap and add bleach based on the following table

Chlorine Required to Dose 100 Feet of Pipe at 50 Parts Per Million (PPM)

Diameter of Pipe Casing (in inches)	5.25% Sodium Hypochlorite (Household Bleach)
2	.25 cup
4	1.125 cups
6	2.5 cups
8	4.25 cups
10	7 cups

- Wait 30 minutes, the surge the well by turning the pump off and on. If possible use the chlorinated water pumping from the well to wash down the casing.
- If there is a tank, add bleach based on the following table.

Chlorine Required to Dose Tank at 50 Parts Per Million (PPM)

Amount of water to be Treated (in gallons)	5.25% Sodium Hypochlorite (Household Bleach)
1,000	1 gallon
2,000	2 gallons
5,000	5 gallons
10,000	10 gallons
25,000	25 gallons

- Open taps at the farthest end of the water system and throughout the house until chlorine odor is detected, then close the taps.
- Let the chlorinated water remain in the well, the storage tank, and any piping in the house for at least 24 hours.
- Flush water to a waste line or appropriate site until there is no chlorine odor in the water.
- Test your water for coliform bacteria to be sure that it is safe for drinking.
- Bacteria may regrow in your water system, it is important to retest your water between two to four weeks after disinfection. If bacteria is detected, repeat disinfection procedure.